

JUNCACEAE

JUNCUS REGELLII Buch. On moist spring-fed slopes, west arm of Mount Shuksan and Panorama Dome.

ORCHIDACEAE

CALYPSO BOREALIS L. Mossy coniferous forest, Skyline Ridge.

HABENARIA UNALASKENSIS Spreng. Open forest along bank of Green Creek.

SALICACEAE

SALIX MELANOPSIS Nutt. In springy bogs near headwaters of South Fork of Nooksack River.

SAXIFRAGACEAE

SAXIFRAGA CAESPITOSA L. On exposed ledges above timber line on Twin Sister Range.

SAXIFRAGA SAXIMONTANA E. Nels. On rocky slopes in alpine meadows.

ROSACEAE

POTENTILLA EMARGINATA Pursh. In crevices of dry ledges above timber line, Skyline Ridge; Twin Sister Range.

ONAGRACEAE

EPILOBIUM GLAREOSUM G. N. Jones. On dry rocky slopes, Mount Hermann.

ERICACEAE

ALLOTROPA VIRGATA Torr. and Gray. In coniferous forests on dry ridges.

BORAGINACEAE

AMSINCKIA INTERMEDIA Fisch. and Meyer. On gravelly soil along roadside near Glacier.

COMPOSITAE

AGOSERIS AURANTIACA (Hook.) Greene. On moraines, above timber line.

ERIGERON AUREUS GREENE. Local in rock crevices on high alpine slopes.

MADIA DISSITIFLORA (Nutt.) Torr. and Gray. On dry banks near Glacier.

TARAXACUM CERATOPHORUM (Ledeb.) DC. On shale slope near perpetual ice, west slope of Mount Baker.

Cornell University, Ithaca, New York,
January, 1940.

REVIEWS

A Manual of Aquatic Plants. By NORMAN C. FASSETT. Pp. 1-382. McGraw-Hill Book Company, New York. 1940. \$4.00.

This is a treatment of a special group of plants that fills a real need of persons engaged in wildlife study or game management as well as of the botanist who must meet public service problems requiring the quick identification of aquatics with only fragmentary material. The work covers the region "from Minnesota to Missouri and eastward to the Gulf of St. Lawrence and Virginia," a restriction of range that is not made clear in the title. However in view of the widespread occurrence of many aquatic plants the book will be found useful over a much wider area than is indicated by these limits. "Bogs, which are often saturated, are excluded from this work as are small woodland brooks, waterfalls, tidal, salt

and brackish waters. With the field thus circumscribed it is still very indefinite." The book is profusely illustrated with excellent line drawings aimed to simplify the problem of identification. The keys are dichotomous with the exception of the first which comprises seventeen simple statements each of an outstanding character that is intended to guide the user to another key to the group under investigation. The keys make full reference to illustrations of specific points which facilitate their use enormously and eliminate the necessity of many words of description. The appendix is directed mainly to the field of game management. It consists of an annotated list of plants with statements of their use by various categories of birds and by mammals and fish; there are bibliographic references to such uses. The author is to be congratulated on the completion of so useful a book.—H. L. MASON.

A Manual of the Liverworts of West Virginia. By NELLE AMMONS. American Midland Naturalist 23: 3-164, pls. 1-26. 1940. University Press, Notre Dame, Indiana. Cloth \$1.75.

This manual includes 56 genera and 111 species, 23 more than have been reported previously for West Virginia. The Jungermanniales comprise a large proportion of the hepatic flora, only 15 species being recorded for the Marchantiales. No new combinations or species are proposed. Dr. Ammons follows the system recently proposed by Evans (Bot. Rev. 5: 49-96. 1939), an arrangement of groups differing from that found in most current floras.

Many items not usually found in bryological manuals are included. In the preface are brief paragraphs on the topography of West Virginia, the history of the study of liverworts in the state, the collection and care of liverwort specimens and a general discussion of the life history and structure of Hepaticae followed by a table giving the differences between mosses and liverworts. These last two sections serve as an introduction to Hepaticae for those who have had no formal bryological training. Brief descriptions of the orders and suborders of Hepaticae followed by an outline giving the sequences of families and genera as proposed by Evans introduce the taxonomic treatment. The main key is to genera rather than to families. This is probably the reason that Dr. Ammons used the less graphic numerical type of key rather than a simple dichotomous key. In a few instances, characters in the key would be extremely difficult to use if one were not already familiar with the group. "Thallus with pores (some exceedingly small and barely discernible)" as opposed to "thallus without pores," is a character that might well stump the amateur. For each species is given a brief description which stresses vegetative rather than reproductive characters, habitat, distribution according to counties within the state and general